

# **Rhode Island Water Resources Board Water Management System Implementation Team**

## **Meeting Minutes**

Wednesday, December 8, 2004

### **Action Items:**

**Prepare** guidance document

**Prepare** Fact Sheets for all basins using USGS Water Availability studies

**Finalize** Chapter I – Context

**Finalize** Chapter II – Lower Blackstone

### **1. Welcome and Approval of Minutes -**

Mr. Dan Varin called the Water Resources Board Water Management System Implementation Team meeting to order at 9:15 a.m. He requested approval of the November 3, 2005 meeting minutes. A motion to approve the minutes was made and seconded. After discussion, the minutes were approved. Mr. Varin referenced materials that will support today's discussion :

#### December 2, 2004 Email Attachments and References

1. December 8, 2004 Meeting Agenda
2. November 3, 2004 Implementation Team meeting minutes
3. Fact Sheet Guidance document
4. Lower Blackstone 2-Page Fact Sheet, Rev.
5. Clear River 2-Page Fact Sheet, Rev.
6. Abbott Run 2-Page Fact Sheet., Rev.
7. Branch River 2-page Fact Sheet, Rev.
8. Peters River 2-page Fact Sheet, Rev.
9. West River 2-page Fact Sheet, Rev.
10. Chepachet River 2-page Fact Sheet, Rev.

#### Meeting Handout Materials

1. RI Water Resources Board Planning Framework, 2-page document
2. Water Allocation Program: Phase I and Phase II Figures
3. Lower Blackstone River Basin USGS Long Term Water Budget

Mr. Varin next turned the meeting over to Ms. Kathleen Crawley, meeting facilitator.

Mrs. Crawley welcomed members stating that today's meeting discussion would focus on a review of the meeting materials. She reviewed the process of designing a water management system for Rhode Island using the Phase I and Phase II figure descriptions. The Phase I: Water Allocation Program Advisory Committee (WAPAC) involved an inclusive water allocation planning effort with 66 participating organizations (150 individuals) to develop a water allocation program for the state. Deliverables from the WAPAC included a final report of twenty-one priority recommendations. The Board approved six recommendations at the March 2004 meeting. The recommendations form the foundation for the design of the Rhode Island Water Management System. The Phase II: Implementation Team was charged to begin implementation of the six water allocation recommendations using the information generated from the U.S. Geological Survey water availability reports. The final deliverable for this

Team will be the preparation of a report that will be forwarded to the Board for action using the water budget fact sheets for each basin and Subbasin

Mrs. Crawley noted that the next steps will include the preparation of fact sheets for all of the basins in Rhode Island using the USGS reports. While some reports have not yet been published, the draft reports contain the data can be used to prepare the fact sheets. She noted that a draft guidance document on how to use the tools would be prepared as the reports are issued. The fact sheets will be used to inform the Local Comprehensive Planning process and the Handbook #16 guidance document instructions.

She reminded members that today's meeting was the last scheduled meeting until the report is prepared. Staff will prepare the report based on the work developed during the 7 Implementation Team meetings. Members were asked to continue to submit recommendations for technical assistance tools.

Mrs. Crawley opened the meeting to discussion on the draft guidance document, fact sheets and the USGS ratio ranking sheets. To begin, she asked for comments and questions relating to the draft guidance document.

**Question:** I don't understand how we can say that the method works. When we get to the bottom line and it says how much water can be answered it says this can't be answered. This is partly true but I don't see what you are going to say. Will the guidance document include the amount of water allocated?

**Response:** In the first layer in the effort here which has been considerable is to just lay out the actual estimated quantities of water that we feel comfortable using and then how do they get applied. The allocation question is one step beyond that. This number is not easily answered at this time, and is one step beyond our work at this point. Right now we are working on developing a system for evaluating how much water is actually there. So the next step will be if we all agree that the 25% during every 4 years during periods of little or no recharge we have less water than that. If we're using that ranking system to say here are basins that need additional attention, that to me is the way that we begin to design our system. This is the first layer, and it makes sense. The second level is to calculate how much water is available and then to also be able to forecast.

**Response:** The optimization studies with identify 28 scenarios tell us of various withdrawal levels will be. So eventually it will be a combination of a management and policy decision. We've looked at some of the more conservative ones and they do tell you how much water is available.

**Statement:** This isn't simple. If it truly is part of that, if you provide a planning document to municipalities and give them a false sense of the amount of water that can be withdrawn. If people drill a well and find that the water isn't there, then they will have spent time and money on a planning document that isn't real.

**Response:** I think the results from the more urbanized basins won't tell them that there is a great amount of water to bedraw-down, it will tell them there is a minimum quantity. We don't have that kind of latitude in decisionmaking. This will require a lot of changes in comprehensive plans and show less development then the plans are currently showing. This becomes also a legal question. For example, in Oregon last month had to demolish its entire planning system and eliminate everything that has been done for the last 30 or 40 years, and that was really the question.

**Question:** Aren't the stream-flow standards helpful for informing this process?

**Response:** The DEM has a revised the White Paper that describes the RI ABF (aquatic base flow) methodology. This draft document will go back to the Stream-flow Committee for final review. The DEM plans to adopt RI ABF as the result of our process. The preferred stream-flow was watershed specific. DEM, with limited resources, plans to refine the permitting process related to stream-flow, and will be working on documents to inform applicants in their applications. After that, watershed specific standards will be developed. The Water Resources Board (WRB) could take the lead on the watershed specific flow effort but the current situation where only 5% of staff time is spent on calculations creates a high possibility for errors. Our preference would be to wait until sufficient resources are available. More time and effort are needed to implement a multi-year process.

**Facilitator:** We must understand how to apply the standard as related to the temporal nature of water flow. For example, response times from a well are delayed almost a year so we need to understand the area and the low flow period. This data begins to help you do that because you have to plan during your most constraining time and then look at the amount of water that you need to have available for your users and the environmental needs. That's what we are trying to do here. Right now we cannot even take the watershed basins and say this is where we should be concentrating our efforts because scientifically we can tell you there is a problem. That is what we're trying to do here – create a system that allows us to do that, and get decision-making process coordinated with that. Perhaps we need to look at stream-flow during the most constrained time. It is important to start here. For example, during a recent briefing with the Governor we described a monthly scenario of the Big River Area and the monthly variations were between 14-30 mg/d. The State must have an active water resources management program or the total resource in the area or the resource will be depleted.

**Statement:** I am concerned that we as a policy-making group haven't set a range to assist local authorities in making decisions. Municipalities are faced with increasing pressures by private developers and a range of numbers would support their decisions.

**Response:** Our discussions have focused on the 25<sup>th</sup> percentile. We don't want municipalities to plan on this range because if they do – then we've gone too far, and the resource is depleted.

**Statement:** I am concerned about the Abbott Run ratio that is showing 96%.

**Statement:** I think the ratios are the most useful but a stream-flow number should also be included.

**Response:** The Abbott Run ratio is validated as it has the thermonuclear plant that has to purchase water when the natural water level reaches the 7Q10 stream-flow level – which is often.

**Statement:** Back to the amount of water to be allocated. The answer should be changed. Since there is no answer, either the question or the answer is wrong. The question should be how to use the numbers?

**Response:** Our intention is to provide the answer but we need to know how to use these numbers.

**Statement:** If we use all of the numbers it still would not create the absolute number needed to plan by. We can't get to the final answer with all of the studies and modeling that we do. So how do we do this? So how can we get a better handle on what we do know. This information may not be enough. I had hoped we could do better.

**Response:** The average withdrawal numbers are good and the 25% numbers are good to plan to at this level. The basin stress ratios are pretty good for the groundwater systems.

**Statement:** We should align planning in the direction that the numbers are heading, and we should make decisions. The document explains but it doesn't provide guidance at what threshold should we become concerned. It is important to figure out how to present the information. Perhaps developing a range of triggers that have actions associated with each trigger. I recommend that we provide an explanation why a specific allocation number is not provided. Elaborate and be upfront about why it is not easy to provide this number.

**Question:** Regarding these current numbers and ratios, how will the numbers change after DEM goes to the RI ABF system?

**Response:** The numbers will change as expanded data reporting come in, and this is on our time horizon and we will improve these numbers over time. The allocable water numbers will change with changes with the RI ABF but for now we will use these numbers.

**Statement:** When RI ABF is used, the question is: Is it appropriate to use median flow numbers with the water availability numbers that are based on 1 in 25 years flow or one in 100 years which is what surface water is based on? It is important to establish the flow numbers on the same statistical basis. Some thought should be given to this issue. There should be a discussion on this.

**Question:** What is the effect? Has DEM actually set a number? What are we going to use for a number? Can we use that number? What is the number? Until DEM provides the number to help us fill out the column we can not fill out this column to use for our planning.

**Statement:** Planners make fact-based decisions that are legally defensible. Planners want the policy to put into their plan. DEM's statement to use a trigger system supported by technical assistance guidance and education is needed. We are struggling to develop these things now. This type of water policy-based information will be needed before you come to SPP for Handbook #16 amendments, etc.

**Question:** If we proceed and manage to the ratio, then how will RI ABF change our ratios? Will the numbers go higher? At what point can a planner make an economic decision if the numbers change?

**Facilitator:** Two things will be happening at the same time. First, we will be producing information. Second, we will be designing a method to produce the information. These numbers are not the process but have some assumptions built in. These assumptions will change over time.

**Statement:** This is what planners need. Anything that helps me and tells me how to use the information is helpful. Give us enough information to help us understand what the information means. We need to be able to answer – "Are we in trouble or are we not?"

**Statement:** We are establishing the upper limit of available water with this. Before we adopt a methodology, we need to apply it to a watershed – like Kent County Water Authority. We need to use the methodology and see if its too simplistic, and then make a decision. The other element that is needed is to connect the water supplier to the municipal planning process. This needs to be brought together .

**Response:** I agree. The end-product should be an upper level number. We have to do studies for each basin so we can work with DEM to make sure we have the most real numbers.

**Statement:** Research has determined the use of stream-flow triggers are not sufficient. DEM realizes there is a wetland problem. We need to coordinate the available water and include the wetland number. Specifics are needed.

**Statement:** We should conduct a pilot project prior to implementing a statewide program. We should also look at the wastewater end of the pipe, arial discharge, and the original design of the systems, i.e.closed loop systems and disposal of wastewater upstream.

**Statement:** These are ways that available water can be modified. At the present time the situation that was just described includes a discharge of 600,000 gallons a day just into the sewer system that is then discharged into the next basin. This is not the kind of thing that we should or can replicate in the future.

**Statement:** I support the use of numbers and need for a pilot project if ABF is used. Using some number for uses and some number for stream-flow allocation, and then use precipitation as a factor.

**Statement:** I'm thinking we shouldn't have a number even at the sub-basin level. There are environmental considerations that will affect how much water is available. What would be more helpful would be to work on these numbers and ratios, and develop very specific actions and recommendations for response. For example, new development must be a net-zero operation in a highly stressed area. If we have a concrete number it will lead to false conclusions.

**Statement:** I agree, we need to include what the options are.

**Response:** We must contrast that with the present situation. Every comprehensive plan allocates the entire community in some combination of uses of water. If it is on the plan, the developer has the right to assume that the water is there. If we do not give the local planners a method to look at those allocations differently than we have not

even approached the problem. If we continue to operate the way we have in the past, then we will definitely have a problem.

**Statement:** I like the “upper limits” language.

**Statement:** Numbers are useful as they could cut permitting in half. If we can’t agree on stream-flow numbers then we could use wetland considerations. Would this expedite the permitting process?

**Statement:** I am concerned that the numbers will be used as an accounting ledger. This is misleading and we must construct a guidance tool that is more than a ledger. The use of the terminology “stressed basin” while hiding the numbers might trigger notice the basin is in trouble. Technical assistance of what to do could be provided for that scenario. People would be able take various actions if they know how the water is being used. For example, if you’re in the red, then you must do this, this, and this.

**Statement:** On the municipal level, new development wants to know if we have the capacity to handle the proposed development. We have to react quickly and we can’t let perfection stand in the way of getting the work done. We get more information then we need sometimes. I like the color-coding first step. At the Narragansett Bay Commission, there is a system that basically says “we have this and you must do that.” This method could be applied to this system. In the next step – the “net 0” concept – municipalities will be required to find water elsewhere using new methods.

**Break:** 10:25-10:35

**Facilitator:** Based on discussion, it appears that a color-code system for each sub-basin based on the ratios is the recommended direction. I remain unclear how the safe yield and surface water numbers will be used as it seems like they would inflate the number. I’m concerned about the levels on the Clear River as it is a small basin where the well is interconnected with the stream and is dependent on inflow from another sub-basin. These issues must be clarified for each sub-basin.

**Statement:** This is exactly why the raw numbers are not sufficient. We need to take a larger look.

**Question:** How does this system work? For example, how can urban areas avoid being in the red? It will be important to develop a model for systems that include both ground and surface water components.

**Statement:** Yes, this is a conundrum. For example, Providence is an importer, and the Providence Supply Board will need to identify more water to support Brownfield’s development. If we set limits, then the municipalities will make decisions on how to manage.

**Question:** What is the difference between Lincoln and Providence? Both obtain their water from the Scituate Reservoir.

**Statement:** Another example would be if a high-rise development is proposed for Kingston village. Water would be needed to support this development. This will require the water to increase the demand for water which in turn, based on current limitations, will require an out-of-basin transfer.

**Response:** Cranston water comes from Pawtuxet Basin that is color-coded. We will need to establish consideration of the source of the water, not just the water supplier.

**Statement:** Redevelopment in Providence with the 70% impervious cover. We are trying to build in treatment and attenuation into the development thus creating water in the system for private investment and initiative.

**Question:** Could you be more explicit on your thought process?

**Statement:** We’ve seen examples of state/art demand management with the net result of new water for new projects. Incentives and new projects could be applied here.

**Statement:** The next step for the Water Supply board should be a discussion on adding stream-flow and categories of basin stress ratios. We could then develop general recommendations for levels of stress with sub-basin specific recommendations for first level evaluations to keep a healthy system. The more specific the information for a particular basin, the more helpful the information will be. I recommend working with the water suppliers on this which will help to get them moving in the right direction.

**Statement:** I agree on basin stress ratios but I don't agree on identifying a finite number over time. It is most important to get the information into the hands of municipal planners as quickly as possible to support the current land use decisions.

**Facilitator:** The questions are already here, and the time has arrived. Can we improve on the existing system? The question on water availability right now takes the form of a letter from the water supplier. We would like to design a planning system that takes this process a little further up the scale. For example, West Warwick created an industrial park and the water supplier agreed there was sufficient water. Then, a lot of development occurred in Kent County that included a casino plan that would require a lot of water. Town officials say there is no water problem based on the prior commitment but this is not true. The residential development has used the available supply but this information never got back the municipalities involved.

**Statement:** I have two observations. First, the water supplier is the best able to evaluate water availability. Second, if the water supply system management plan projection was incorrect then this should require the plan to be revised. In the above example, the municipality counted on available water (3.5 mg/d shortfall) but they were wrong. This is a difficult business. Is it better to know or not to know?

**Statement:** We need to give the towns a process that will help them plan and project growth.

**Facilitator:** We want to take the process developed here, and apply it to the Lower Blackstone. We then hope to come back with a document that has guidance and uses a description of what the next steps will be and how complicated these steps will be.

**Question:** How will the colors get associated with a town or basin?

**Facilitator:** The basin information will need to be incorporated into the municipal planning process. But first, the pilot study will need to be completed so that we can develop recommendations that include land use, public and self-supply sources, ground and surface water distinctions.

**Statement:** The basin plan should recommend to municipalities the actions needed. The information is needed so we will know what the impacts are. For example, I am working with a small entity that DOH has licensed with the caveat to hook up to the public water supply. There is a disconnect at the state level since this is occurring, and, there are 3 licensed suppliers in my area.

**Statement:** The Team is developing a prototype that won't be perfect. We are not trying to set a record but we are developing experience. Kathleen Crawley and Beverly O'Keefe have received good feedback and information from this process. I want to thank Ms. Crawley and Ms. O'Keefe for maintaining their positive demeanor throughout this process.

**Question:** Will the "red zone" include rulemaking or legislation?

**Facilitator:** This could be a consideration. If the recommendations are placed into the local comprehensive planning process, then within a year, the recommendations would become enforceable either by the Attorney General or any resident of the State.

**Statement:** This will require each community to adjust its laws, zoning requirements, etc., based on these recommendations.

**Statement:** One possibility on the evolution of the information could be that the yellow-orange-red zones would have conditions or requirements that the developer would have to address. For example, a storm-water plan was just completed that puts the water back into the ground and not the sewer. Another example involves the Narragansett Bay Commission who took over the Johnston sewer system as a result of overflows, etc. NBC declared a moratorium but no plan was in place so NBC developed a plan but development continued. NBC made Johnston remove illegal connections and make improvements three-fold over what could have been if a plan had been in place.

**Facilitator:** I think this has been recently demonstrated in North Smithfield where the judge found for the condo developer as he had approached the town for water prior to building the condo.

**Statement:** We will make it work if you give us information on how to make it work.

**Chairman:** It is about time to wind up. We will schedule another meeting as soon as we have a working draft ready for your review and comment.

There are no additional meetings scheduled at this time. The meeting was adjourned at 11:00 A.M.

Respectfully submitted,

Beverly O'Keefe  
Supervising Planner

Meeting Attendees:

Bettencourt	Al	RI Farm Bureau
		US Geological Survey
Cassidy	Mike	City of Pawtucket Planning
Collins	Beth	RI Economic Policy Council
Crawley	Kathy	RI Water Resources Board
Dzykewicz	Andrew	RI Economic Policy Council
Griffith	Robert	RI Water Resources Board
Hess	Nancy	Statewide Planning Program
Johnson	Ariana	RI EPC
Kerr	Meg	RI Rivers Council
Kilduff	Robert	Providence Water Supply Board
Mariscal	Juan	Warwick Sewer Authority
Marks	Eugenia	Audubon Society of RI
Meyer	Henry	Kingston Water District
O'Keefe	Beverly	RI Water Resources Board
Balke	Rebecca	Comprehensive Environmental Inc.
Scott	Elizabeth	RI DEM
Sobel	Allison	Brown University
Varin	Daniel	Chairman, RI Water Resources Board
Veeger	Anne	Univ. of RI-Geosciences
Ward	Harold	Pawcatuck Watershed